

Dean Levi

List of Publications by Year in descending order

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52
papers

1,286
citations

567281

15
h-index

477307

29
g-index

52
all docs

52
docs citations

52
times ranked

1504
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of CdCl ₂ treatment on the recrystallization and electro-optical properties of CdTe thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 1251-1257.	2.1	177
2	Time-resolved photoluminescence studies of CdTe solar cells. Journal of Applied Physics, 2003, 94, 3549-3555.	2.5	177
3	Recombination kinetics and stability in polycrystalline Cu(In,Ga)Se ₂ solar cells. Thin Solid Films, 2009, 517, 2360-2364.	1.8	164
4	The role of drift, diffusion, and recombination in time-resolved photoluminescence of CdTe solar cells determined through numerical simulation. Progress in Photovoltaics: Research and Applications, 2014, 22, 1138-1146.	8.1	89
5	Physical characterization of thin-film solar cells. Progress in Photovoltaics: Research and Applications, 2004, 12, 177-217.	8.1	80
6	Optical characterization of highly conductive single-wall carbon-nanotube transparent electrodes. Physical Review B, 2007, 75, .	3.2	77
7	Beneficial effect of post-deposition treatment in high-efficiency Cu(In,Ga)Se ₂ solar cells through reduced potential fluctuations. Journal of Applied Physics, 2016, 120, .	2.5	75
8	Investigation of induced recrystallization and stress in close-spaced sublimated and radio-frequency magnetron sputtered CdTe thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 1793-1798.	2.1	69
9	Charge carrier dynamics and recombination in graded band gap CuIn _{1-x} Ga _x Se ₂ polycrystalline thin-film photovoltaic solar cell absorbers. Journal of Applied Physics, 2013, 114, .	2.5	37
10	Historical Analysis of Champion Photovoltaic Module Efficiencies. IEEE Journal of Photovoltaics, 2018, 8, 363-372.	2.5	37
11	Effect of Cu deficiency on the optical properties and electronic structure of CuInSe ₂ and CuIn _{0.8} Ga _{0.2} Se ₂ determined by spectroscopic ellipsometry. Applied Physics Letters, 2004, 85, 576-578.	3.3	35
12	Above-bandgap ordinary optical properties of GaSe single crystal. Journal of Applied Physics, 2009, 106, .	2.5	31
13	Complex dielectric function and refractive index spectra of epitaxial CdO thin film grown on r-plane sapphire from 0.74 to 6.45 eV. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2010, 28, 1120-1124.	1.2	21
14	Influence of surface composition on back-contact performance in CdTe/CdS PV devices. Progress in Photovoltaics: Research and Applications, 2000, 8, 591-602.	8.1	19
15	Apparent bandgap shift in the internal quantum efficiency for solar cells with back reflectors. Journal of Applied Physics, 2017, 121, .	2.5	18
16	Metastable defect response in CZTSSe from admittance spectroscopy. Applied Physics Letters, 2017, 111, 142105.	3.3	15
17	Processing and characterization of large-grain thin-film CdTe. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1994, 12, 2803-2807.	2.1	13
18	Novel method for growing CdS on CdTe surfaces for passivation of surface states and heterojunction formation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1997, 15, 1119-1123.	2.1	13

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19	Understanding The Role Of Defects In Limiting The Minority Carrier Lifetime In Sic. Materials Research Society Symposia Proceedings, 1997, 483, 197.	0.1	13
20	Ellipsometric study of single-crystal In_2Se_3 from 1.5 to 9.2 eV. Applied Physics Letters, 2010, 96, 181902.	3.3	13
21	Electrical characterization of etched grain-boundary properties from as-processed px-CdTe-based solar cells. , 1999		10
22	Above-band-gap dielectric functions of ZnGeAs $\langle\text{mml:math display="inline">\rangle$ xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>:	3.2	10
23	Ellipsometric measurements and quasiparticle self-consistent<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvarian Development of lattice-matched 1.7 eV GaInAsP solar cells grown on GaAs by MOVPE. , 2016, , .		10
24	Locating the electrical junctions in Cu(In,Ga)Se $\langle\text{sub}\rangle 2\langle\text{/sub}\rangle$ and Cu $\langle\text{sub}\rangle 2\langle\text{/sub}\rangle$ ZnSnSe $\langle\text{sub}\rangle 4\langle\text{/sub}\rangle$ solar cells by scanning capacitance spectroscopy. Progress in Photovoltaics: Research and Applications, 2017, 25, 33-40.	8.1	10
25	Precontact surface chemistry effects on CdS/CdTe solar cell performance and stability. , 0, , .		9
26	NREL's Cell and Module Performance group's asymptotic Pmax protocol for perovskite devices. , 2017, , .		7
27	Materials and Interface Optimization of Heterojunction Silicon (HIT) Solar Cells Using in-situ Real-Time Spectroscopic Ellipsometry. Materials Research Society Symposia Proceedings, 2004, 808, 419.	0.1	6
28	Interface Reactions in CdTe Solar Cell Processing. Materials Research Society Symposia Proceedings, 1997, 485, 215.	0.1	5
29	Tin oxide stability effectsâ€”their identification, dependence on processing and impacts on CdTe/CdS solar cell performance. AIP Conference Proceedings, 1997, , .	0.4	5
30	In situ studies of the amorphous to microcrystalline transition of hot-wire chemical vapor deposition Si:H films using real-time spectroscopic ellipsometry. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2003, 21, 1545-1549.	2.1	5
31	Precise determination ofÂoptical properties ofÂpentacene thin films grown on various substrates: Gaussâ€”Lorentz model with effective medium approach. Applied Physics B: Lasers and Optics, 2011, 104, 139-144.	2.2	5
32	Sulfur Diffusion In Polycrystalline Thin-Film CdTe Solar Cells. Materials Research Society Symposia Proceedings, 1997, 485, 203.	0.1	4
33	Development of Two-photon excitation time-resolved photoluminescence microscopy for lifetime and defect imaging in thin film photovoltaic materials and devices. , 2015, , .		4
34	Comparison study of close-spaced sublimated and chemical bath deposited CdS films: effects on CdTe solar cells. , 0, , .		3
35	Silicon Heterojunction Solar Cell Characterization and Optimization using in Situ and Ex Situ Spectroscopic Ellipsometry. , 2006, , .		3
36	Density profiles in sputtered molybdenum thin films and their effects on sodium diffusion in Cu(In<inf>x</inf>Ga<inf>1−x</inf>)Se<inf>2</inf> photovoltaics. , 2011, , .		3

#	ARTICLE	IF	CITATIONS
37	Photoluminescence excitation spectroscopy characterization of cadmium telluride solar cells. , 2016, , .		3
38	Comment on "Optical characterization of $\text{CuIn}_{1-x}\text{Ga}_x\text{Se}_2$ alloy thin films by spectroscopic ellipsometry" [J. Appl. Phys. 94, 879 (2003)]. Journal of Applied Physics, 2006, 100, 096102.	2.5	2
39	Development of scanning capacitance spectroscopy of CIGS solar cells. , 2015, , .		2
40	Accurate Efficiency Measurements for Emerging PV: A Comparison of NREL's Steady-State Performance Calibration Protocol Between Conventional and Emerging PV Technologies. , 2019, , .		2
41	Effect and optimization of CdS/CdTe interdiffusion on CdTe electrical properties and CdS/CdTe cell performance. , 1999, , .		1
42	Characterization of layer thickness and interdiffusion in CdTe/CdS/ZTO/CTO solar cells. , 0, , .		1
43	Effects of substrate temperature on the optical properties of polycrystalline CuInSe_2 thin films. , 2010, , .		1
44	RF-sputtered ITO and ITO:Zr studied by in situ spectroscopic ellipsometry. , 2010, , .		1
45	Admittance spectroscopy in CZTSSe: Metastability behavior and voltage dependent defect study. , 2016, , .		1
46	Effects of Back Contact Treatments on Junction Photoluminescence in CdTe/CdS Solar Cells. Materials Research Society Symposia Proceedings, 1997, 485, 209.	0.1	0
47	Effect of Cu deficiency on the optical properties and electronic structure of $\text{CuIn}_{1-x}\text{Ga}_x\text{Se}_2$ ($x = 0$), T_j ETQq1 1 0.784314 rgBT / Over 0.4 80		0
48	Materials Optimization for Silicon Heterojunction Solar Cells Using Spectroscopic Ellipsometry. Materials Research Society Symposia Proceedings, 2007, 989, 4.	0.1	0
49	Optical properties of Zn(O,S) thin films deposited by RF sputtering, atomic layer deposition, and chemical bath deposition. , 2012, , .		0
50	Minority carrier lifetimes in 1.0-eV p-In _{0.27} Ga _{0.73} As layers grown on GaAs substrates. , 2014, , .		0
51	Determination of the electrical junction in $\text{Cu}(\text{In}, \text{Ga})\text{Se}_2$ and $\text{Cu}_2\text{ZnSnSe}_4$ solar cells with 20-nm spatial resolution. , 2016, , .		0
52	Quantitative Study of the Effect of Non-Uniform Irradiance on Module Performance Combining EL and DLIT Imaging with Circuit Modeling. , 2018, , .		0